# RGB Surface Mount LED Pixels

Lumex is announcing its new line of point-source red-green-blue (RGB) surface mount LED pixels. These unique devices, which appear as full-color point sources to the human eye, are able to generate any mixture of the three primary colors. They are ideal for high-end indoor and outdoor signage, full color video indoor display screens, and all types of high-resolution full color displays. Lumex's RGB LED pixels can also be used anywhere multi-color lights are needed in strips or clusters for applications such as architectural lighting or retail promotional lighting, as well as for display or character backlighting, medical diagnostic instrumentation displays or keypad/keyboard illumination.

These surface-mount devices include individually-addressable red, blue, and green LED chips combined into a single package. Built-in reflector and/or lenses combine the output of these chips to create what appears to be a point-source pixel &#151 even at distances as close as 10 inches (25cm). High density, full-color displays are easily created by placing the driver electronics on the rear side of the circuit board and mounting the LED pixels side-by-side on the front of the board. Circuit board utilizing Lumex surface mount RGB point-source LED pixels can be assembled using standard surface mount technology picking, placing and soldering techniques.

Lumex's surface mount RGB point-source LED pixels are available in five different packages: a 2832-size (2.8 mm &#215 3.2 mm) rectangular transfer-molded package, a 3632-size (3.6 mm &#215 3.2 mm) rectangular printed circuit carrier package, a 5 mm &#215 5 mm square dome, a T5-mm round dome, and a T8-mm round dome. Axial intensities range from 8 mcd over a 120 degree viewing angle, to 900 mcd over a 30 degree viewing angle-all measured with a forward current of 20 mA.

In addition to these five different package styles, different chip technologies can also be chosen. For maximum brightness, AlInGaP can be specified for red and InGaN for blue and green. For lowest cost, GaAlAs is available for red, GaP for green, and Ga/SiC for blue. Other options include custom lens shapes for the dome lens package.

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